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NAVY EXPERIMENTAL DIVING UNIT PANAMA CITY FL  
EVALUATION OF AQUA CROWN SWIMMER SAFETY HELMET, MODEL C-2.(U)  
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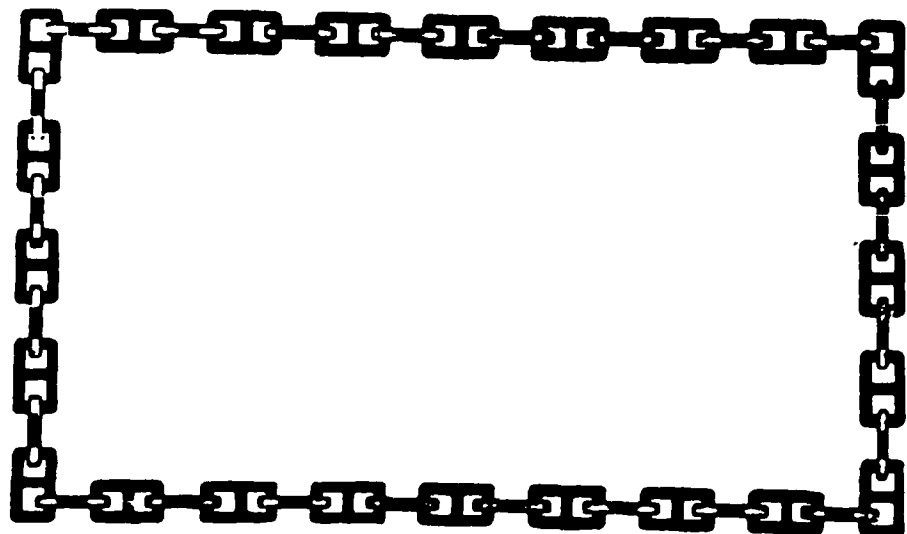
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DEPARTMENT OF THE NAVY  
NAVY EXPERIMENTAL DIVING UNIT  
Panama City, Florida 32401

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NAVY EXPERIMENTAL DIVING UNIT  
REPORT 6-76

EVALUATION OF AQUA CROWN  
SWIMMER SAFETY HELMET, MODEL C-2

D. J. SCHMITT

June 1976

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# ABSTRACT

Evaluation of the Aqua Crown Swimmer safety helmet model C-2 revealed a number of design disadvantages which prevent it from being recommended for Navy approval. However, modification of this safety helmet to "skull cap" size may result in a more workable configuration for Navy diving purposes.

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## INTRODUCTION

The Aqua Crown Premier Suit and Accessory Company swimmer safety helmet, model C-2, was submitted to the Navy Experimental Diving Unit for test and evaluation. This helmet was tested on a total of four dives between 5 and 13 June 1976. The dives ranged in depth from 6 to 40 feet. Total time logged with the test helmet was 3 hours.

## TEST RESULTS

When a diver wearing the helmet jumped into the water feet first from a dock or boat, the helmet caused a jerking motion to his neck as his head entered the water. If the jerking were severe enough, injury would result.

The helmet prevented normal face mask clearing (holding the head back and blowing), requiring the diver to tilt his head to the side. When the diver lifted his head to a normal up angle for swimming, the back of the helmet caught on the tank manifold.

Other disadvantages disclosed by the tests were the discomfort caused by the chin strap after 30 to 40 minutes of helmet use, the inability of a surface diver to remove his mask until the helmet is removed, and a poorly constructed neck strap.

## CONCLUSIONS AND RECOMMENDATIONS

Evaluation of the swimmer safety helmet leads to a recommendation that the helmet be cut down to "skull cap" size. In this configuration, it could be useful to a working diver where there is danger of striking his head.

There does not appear to be any advantage in this helmet for the average sport SCUBA diver. Additional tests such as inflating a safety vest or entering the water from a moving boat may disclose other hazards or disadvantages to this piece of equipment.

The swimmer safety helmet in its present configuration cannot be recommended for Navy approval.

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